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THE CENTER LINE
MONTANA HIGHWAY COMMISSION

Vol. III No. 2 March 1960

Even though construction of highways was slowed down in 1959, purchase of right of way continued at a record pace in Montana.

Lewis Chittim's crew really got going and before the year was over they had purchased a total of $5,159,292.16 in right of way.

In addition to actual right of way expenditures, it was necessary to expend a total of $530,913.54 to move and adjust utilities which were affected by new highway construction.

Prior to the awarding of a highway contract, much time and work is necessary to make the surveys and to design the road. Preliminary engineering costs during the year of 1959 amounted to $1,889,872.88.

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Our highway display, comprised of a model diamond interchange and two dioramas, with a backdrop of photos of some of our projects will be on display at the Butte Sports Show March 18, 19 and 20 and at the Missoula Home Show on March 23rd through the 27th. We plan to enlarge and implement our display from time to time, making it available for fairs and exhibits.

As the construction of four-lane, controlled access highways continues in Montana, drivers will need to know how to traverse interchanges. They are not difficult, once a driver knows how to use them, and the elimination of dangerous intersections and approaches should be a welcome innovation to Montanans. With our heaviest traffic sections becoming free flowing, medians separating opposite traffic and no drivers up ahead holding up traffic by trying to make left turns, much will be added to the pleasure of driving. Our models are intended to help educate the driver in negotiating interchanges.

The two dioramas depict other phases of our work. One shows why it costs the highway department some $46,000. annually to replace damaged signs; the other illustrates how we endeavor to keep trash and rubbish from our roadways. Other dioramas are planned for snow removal and sanding, and on construction.

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Inasmuch as the business of building highways is a huge investment, and one in which everyone should be interested, we plan on enlarging the number of speakers available for talks and discussions with civic organizations and other groups desiring the latest and most authentic information about the highway program. A list of speakers and programs is being compiled now. A call or letter to the Public Information Coordinator's office will provide a program or a speaker.

Employees receiving service pins in December and January were: Henry B. Martin, Great Falls for 30 years; Archie Ray Brandon, Havre, George H. Clouse, Bozeman, Nate F. Green, Wolf Point, and George Hein of Billings, all for 25 years; Cecil C. Holmes and Carl Stav, both from Missoula, 20 years; Phill J. Datta, Glendive 15 years; Kermit L. Anderson, Havre and George Jovanovich, Billings, 10 years each; Donald L. Watson, Great Falls, William A. Bridges, Helena Shop and Morley E. Jackson, also of Helena Shop, Donald D. Gruel, Helena Preconstruction, William D. Kaufman and Blain R. Warner, both from Havre, all for 5 years.

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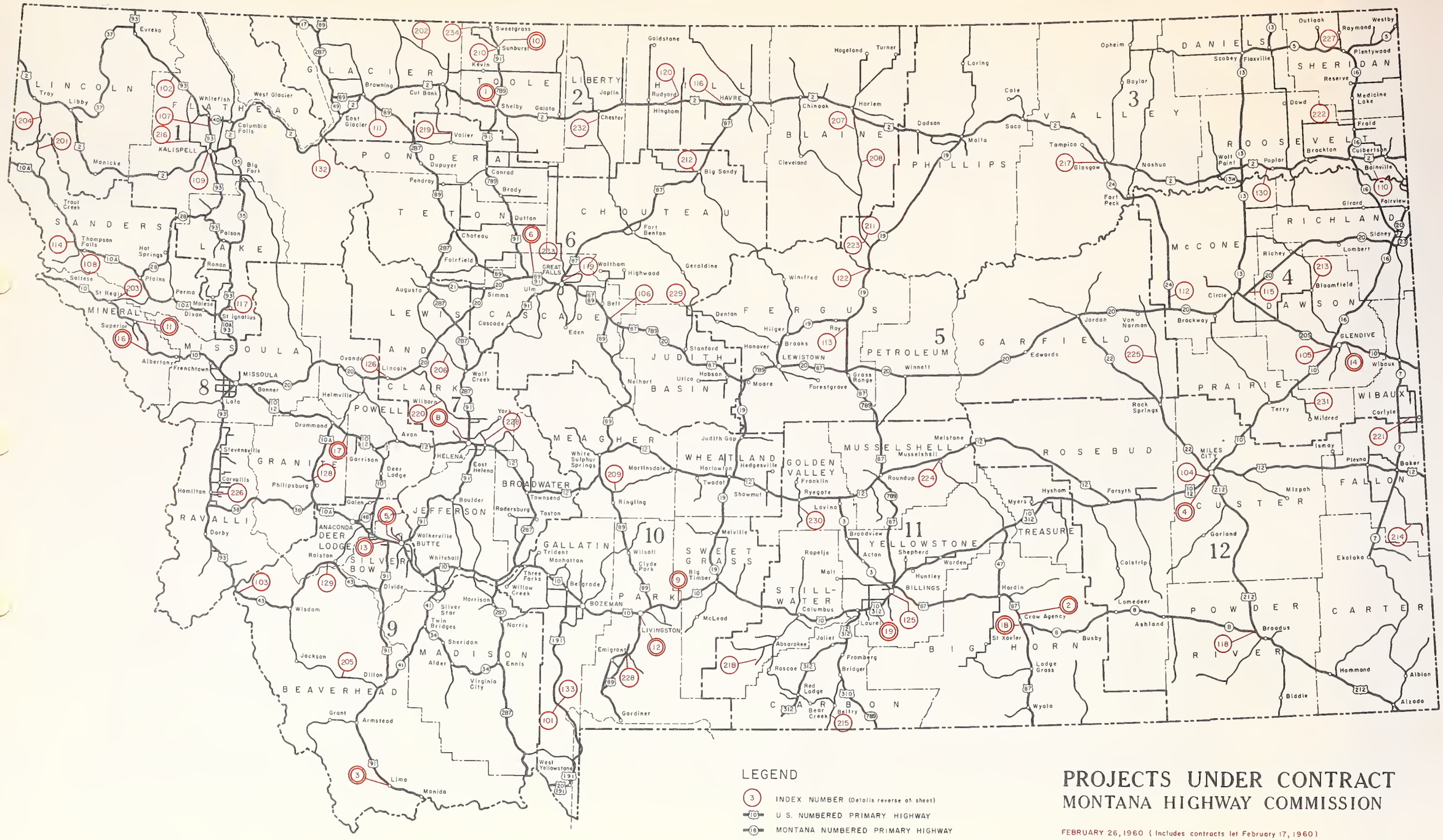
CONTRACTS AWARDED — FEBRUARY 17th

PROJECT	AWARDED TO	AMOUNT OF BID
I-IG-15-1(9) O Lima-Monida Road	Peter Kiewit Sons's Co. Billings, Montana	$ 484,014.46
I-15-2(9)128 Butte Urban Road	Cahill-Mooney Construction Co. Butte, Montana	334,588.39
F-43(14) Unit 2 Wisdom-Divide Road	Naranche & Konda Construction Co. Butte, Montana	137,266.67
F-84(27), F-84(28) and F-FG 273(11) West Wolf Point-North Dakota Line Road	Albert Lalonde Company Sidney, Montana	758,200.96
I190-1(11)60 and I-90-3(9)157 Mineral, Granite & Powell	Parker & Knez Construction Hamilton, Montana (For Seeding and Mulching)	49,558.80*
F-315(13) Unit 1 Van Norman-Glasgow Road	Wickens Brothers Suffolk, Montana	254,299.91
F-315(13) Unit 2 Van Norman-Glasgow Road	C.B. Lauch Construction Co. Great Falls, Montana	74,183.88
F-333(23) Unit 1 Grassrange-Malta Road	Wilbur Christensen Co. Rapid City, South Dakota	366,519.69
F-333(23) Unit 2 Grassrange-Malta Road	Walter Mackin & Son Billings, Montana	53,846.40
F-391(11) Unit 1 Circle-Sidney Road	Wickens Brothers Suffolk, Montana	271,618.48
F-391(11) Unit 2 Circle-Sidney Road	Holland Construction Co. Bozeman, Montana	37,692.76
U-F-FG-395(4) 15th Street South-Great Falls	Robertson & Cave & Sletten Construction Great Falls, Montana	1,139,281.67
S-71(3) Ryegate-South Road	Stanley H. Arkwright, Inc. Billings, Montana	128,619.66
S-303(4) Chester-South Road	The O'Neil Construction Co. Havre, Montana	214,688.37

* Awarded on the basis of the hay-straw alternate bid.

Map Indax Number	Project Number	LENGTH, TYPE OF CONSTRUCTION AND LOCATION	Probeble Completion Date
	FEDERAL AID INTERSTATE PROJECTS		
1	I-IG-ING 15-8 (3) 351	5.6 miles (2.9 miles four lane divided) grading, drainage, surfacing, plant mix and eeal coat oiling - Three prestressed concrete and steel beam ovarpessea, two 360 foot G. N. Ry. and U. S. 2, one 276 foot U. S. 91 - North Shelby Interchange (US 91 - Shalby North)	9-1-60
2	IN 90-9 (5) 498 U 1	11.6 miles (4.9 miles four lane divided) greding, drainaga, surfecing, plant mix seel	
	IN 90-9 (7) 508 U 1	coat oiling and fencing (US 87 - Crow Agency North)	6-1-60
	I 90-9 (11) 498	11.6 miles grass seeding (US 87 - Crow Agency North)	4-30-60
3	I-IG-15-1 (9) 0	17.1 miles plant mix bituminous end saal coat oiling (US 91 - Monide thru Lima)	9-30-60
	I-IN 82-01 (6) U 1	5.0 miles grading, dreinage, eurfacing, end bituminous eurfaca treatment (U. S. 91 - Lima Northwest)	3-31-60
4	I 94-4 (3) 134	Ona 268 foot steel girdar overpeee - Miles City Weet Interchange, Ona 290 foot riveted plate girder bridge - Tongue River, Two prestreseed concrete beam overpeseee, One 153 foot - County Road, end one 158 foot - U. S. 212 (U. S. 10 - Milae City Weet)	7-31-61
	I 94-4 (5) 127 U 1	8.5 miles (0.8 miles four lene dividad) greding, dreinage, surfacing, Portlend Cement paving, plant mix bituminous end seel coat oiling. One 214 foot praetressed concrete beam overpase - Radar Bese Interchenge. Three concreta elab junior grade seperetione.(U. S. 10 - Miles City West)	9-15-61
	I 94-4 (5) 127 U 2	8.5 miles fencing (U. S. 10 - Milas City Weet)	11-15-60
5	I 15-2 (9) 128	Five preatreeeed concrete beam overpeeses. One 225 foot - Lexington Avanue, Ona 225 foot - Oregon Avenue, Dual 210 foot - Harrison Avenue Interchange, One 210 foot Sheridan Street (U. S. 91 - In Butte)	7-30-61
6	I 15-5 (9) 275 U 1	8.3 miles four lane divided, grading, dreinage, aurfacing, plant mix bituminous end eeel coat oiling (US 91 - Weet of Great Falls)	9-15-60
	I 15-5 (9) 275 U 2	Three bridgee, two 108 foot prestreeeed concrete beam - Manchester Interchange, one 219 foot eteel girder - Vaughn Intarchenge, end two dual concrata slab junior grada eeparations (U. S. 91 - Weet of Greet Fells)	7-31-60
	I 15-5 (9) 275 U 3	8.3 milas fencing (US 91 - West of Great Falle)	6-1-60
8	I-IG-ING 15-4 (4) 184 U 1	1607 foot total langth duel steel end concrate overpaeeee - G.N. Ry. & N.P. Ry. (US 91 - Helena)	11-30-60
9	I 117 (10) U 2	4.0 milae (1.6 miles four lane dividad) greding, drainage, surfecing and plant mix oil (U. S. 10 - Eeet of Livingston)	7-15-60
10	I-IG 15-8 (6) 379 U 1	4.2 milee greding, dreinage, surfacing, plant mix bituminous and eeal coat oiling. One 313 foot eteal girder - G.N. Ry. One 168 foot prastraseed concrete beam - Sunburst Interchenge - Overpasaes (U. S. 91 - Sunburst North)	7-30-61
	I-IG 15-8 (6) 379 U 2	4.2 miles fencing and cattlaguards (US 91 - Sunburst North)	8-15-60
11	I 90-1 (5) 46	Two steel riveted plate girder bridges, one 621 foot, one 801 foot, Clark Fork (US 10 - North and South of Superior)	8-31-60
	I 90-1 (6) 43 U 1	6.7 miles (1.2 milas four lane divided) grading, drainage, surfacing, plant mix bituminous end seal coat oiling. Ona concreta sleb junior grade separation. (US 10 - North and South of Superior)	7-1-61
	I 90-1 (6) 43 U 2	Threa praetreased concrete beam bridgae, two 153 foot - Superior Intarchenge, one 168 foot - Ceder Creek (U. S. 10 - At Superior end East)	7-31-60
	I 90-1 (6) 43 U 3	6.7 miles fencing end cattleguards (U. S. 10 - North end South of Superior)	10-1-60
12	I 90-7 (4) 330	730 foot - Dual Structuras - Rivated Plete Girder Bridgee - Yellowstone River (U. S. 10 - South of Livingston)	9-30-61
13	I-ING 15-2 (8) 118	4.2 milas (2.5 miles four lane divided) grading, drainage, surfacing, plent mix bituminoue end seal coet oiling, three prestreseed concrete bridges, one 210 foot Victor Intarchenge, one 599 foot end one 614 foot B.A. & P. Ry.,C.M.S.T. P&P RY, NP RY, end Clark Fork (US 91 - West of Butte)	11-1-60
14	I 94-6 (2) 216	4.2 miles greding, drainage, surfecing, plent mix bituminous and eeel coat oiling (U. S. 10 - Eaet of Glendive)	7-1-60
16	I 90-1 (4) 60 U 1	5.0 miles (2.0 miles four lana) grading, drainege, surfacing, plant mix, aeel coat oiling end fencing (U. S. 10 - Southeaat of Superior)	7-1-60
	I 90-1 (7) 60 U 1	5.0 miles signing and delineetion (U. S. 10 - Southeaat of Superior)	5-30-60
	I 90-1 (11) 60	5.0 milee grese seeding (U. S. 10 - Southeeet of Superior)	4-30-60
17	I 90-3 (3) 157 U 1	9.6 miles four lane, greding, drainage, eurfacing plant mix, seal coat oiling and fencing (U. S. 10 - East of Drummond)	6-30-60
	I 90-3 (9) 157	9.6 milas grass saeding (U. S. 10 - Eest of Drummond)	4-30-60
	I 90-3 (5) 157 U 1	9.6 milea signing and delineation (U. S. 10 - Eaet of Drummond)	5-30-60
18	I 90-9 (10) 498 U 1	18.1 miles signing and delineation (U. S. 87 - Crow Agency North and South)	6-1-60
19	I 90-8 (8) 438 U 1	6.4 milea four lane grading, drainage, surfacing, plant mix bituminous end eeel coat oiling. Same construction on frontage roada. Two 153 foot prestressed concrete beam overpaseee - Beet Dump Separation (U. S. 10 - West of Billings)	9-1-60
	I 90-8 (8) 438 U 2	6.4 miles fencing (U. S. 10 - West of Billings)	10-1-60
	FEDERAL AID PRIMARY PHOJECTS		
101	FHP 42-K2, L3	8.9 miles grading, drainage, surfacing, bituminous surface treatment and two concrete girder bridges, one 122 foot - West Gallatin River, one 105 foot - Taylor Fork (U. S. 191 - South of Bozeman)	1960
102	FHP 12-A4, B3, C2	14.0 miles of surfacing, bituminous plant mix and seal coat oiling (U. S. 93 - Southeast of Eureka)	1960
103	FHP 20-A	7.8 miles (1.0 miles in Idaho) grading, drainage and 38 foot reinforced concrete girder bridge - Trail Creek (Montana 43 - west of Wisdom)	1960
104	F.135 (17)	0.6 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 10 - Miles City West)	9-15-61
05	U 121 (3)	2.7 miles (2.3 miles four lane divided) grading, drainage, surfacing, plant mix and seel	
	F 130 (15) U 1	coat oiling - (U. S. 10 - Glendive Southwest)	6-30-60
106	F 235 (26) U 1	5.3 miles grading, drainage, surfacing, plant mix and seal coat oiling (U. S. 87 - Southeast of Belt)	7-1-60
107	F 100 (8)	14.6 miles (7.3 miles grading, drainage, surfacing, plant mix bituminous and seal coa. oiling)	
	F 270 (9)	(7.3 miles plant mix bituminous and seal coat oiling (U. S. 93 and Montana 40 -	
	F 270 (10)	Whitefish - South)	7-1-60
108	FHP 6 D5	2.0 miles fencing. (U. S. 10A - Thompson Falls West)	5-30-60
109	U 58 (23), U 257 (14) U1, F 270 (7) U 1	2.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 & 93 - In Kalispell)	10-1-60
110	F 84 (27)	8.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - East of Culbertson)	11-30-60
111	F 190 (3)	7.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 87 - Southeast of Browning)	7-15-60
112	F 315 (13) U 1	8.3 miles grading and drainage (Montana 24 - Junction Montana 20 North)	11-30-60
	F 315 (13) U 2	One 205 foot prestressed concrete beam bridge - Timber Creek (Montana - 24 - Junction Montana 20 North)	9-30-60
113	F 333 (23) U 1	11.8 miles grading, drainage, and surfacing. (North of Grass Range)	6-15-61
	F 333 (23) U 2	One 92 foot prestressed concrete beam bridge (North of Grass Range)	9-30-60
114	F-F-90 (4) FH	949 foot steel and concrete bridge - Clark Fork (US 10 A relocation - west of Thompson Falls)	7-31-60
115	F 391 (11) U 1	9.1 miles grading and drainage (Montana 20 - East of Circle)	11-30-60
116	F-FG 95 (11) U 1	7.1 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - West of Havre)	9-15-60
117	F 192 (8), F 194 (4), F 197 (6), and F 63 (7)	16.7 miles (14.5 miles grading, surfacing) (8.5 miles drainage), plant mix, seal coat oiling and traffic delineation (US 10 A & 93 - North and South of St. Ignatius)	6-1-60
118	DF 198 (4), F 334 (15) U 2 DF 334 (16)	20.4 miles grading, drainage, soil cement stabilization, plant mix and seal coat oiling (US 212 & Montana 8 - Broadus West)	6-1-60
119	U-F-FG 395 (4)	One 1126 foot steel riveted plate girder bridge - G.N. Ry. and Missouri River (U. S. 87 Bypass - Great Falls North)	11-30-61
120	F 132 (7)	12.7 miles (9.0 miles grading, drainage and surfacing) plant mix bituminous and seal coat oiling (U. S. 2 - Hingham East and West)	9-1-60
122	F 333 (24)	19.9 miles surfacing, plant mix and seal coat oiling (Montana 19 - From 4.5 miles south Missouri River North)	7-31-60
125	F-FG 228 (14)	1711 foot prestressed concrete bridge - N.P., G.N., & C.B.&Q.RR. (US 10 - Billings)	6-1-60
	F 228 (18)	0.3 miles grading, drainage, surfacing and bituminous surface treatment (U. S. 10 - Billings)	6-1-60
126	F 267 (10)	16.5 miles surfacing and plant mix bituminous oiling (Montana 20 - Lincoln East and West)	7-10-60
128	F 78 (7)	9.7 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 10 A - north of Philipsburg)	6-16-60
129	F 43 (14) U 1	Two bridges, one 235 foot prestressed concrete beam and one 325 foot riveted steel girder - Big Hole River (Montana 43 - East and West of Ralston)	8-31-60
	F 43 (14) U 2	1.9 miles grading, drainage, surfacing and bituminous surface treatment of approaches to bridges on F 43 (14) U 1. (Montana 43 - East and West of Ralston)	8-30-60
130	F 84 (26)	9.8 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (U. S. 2 - Poplar West)	6-15-60
132	FHP 13-I5, J3	4.0 miles grading, drainage and surfacing (U. S. 2 - Southwest of East Glacier)	1960
133	FHP 42 J6, K3, L4	16.8 miles plant mix bituminous surfacing and seal coat oiling (U.S. 191 - South of Bozeman)	1960
	FEDERAL AID SECONDARY PROJECTS		
201	FHP 5-A1, B	9.1 miles grading and one 79 foot concrete slab bridge - Bull River (South of Troy)	1960
202	S 185 (2)	32.1 miles surfacing, plant mix bituminous and seal coat oiling (North of Cut Bank)	6-15-60
203	S 216 (2)	3.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (St. Regis - Northeast)	6-30-60
204	S 38 (6)	5.9 miles grading, drainage, surfacing, plant mix and seal coat oiling (South of Troy)	7-15-60
205	S 35 (9)	5.0 miles grading, drainage and surfacing (West of Dillon)	9-30-60
206	S 228 (1)	17.8 miles grading, drainage, surfacing and bituminous surface treatment (Wolf Creek - Northwest)	7-1-60
207	S 187 (1) U 1	12.6 miles grading, drainage, surfacing and bituminous surface treatment (South of Harlem)	6-15-60
208	S 187 (2) U 1	14.0 miles of grading, drainage, surfacing and bituminous surface treatment (South of Harlem)	6-1-60
209	S 14 (8)	11.9 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling - (Northeast of Ringling)	8-31-60
210	S 366 (5)	0.5 mile surfacing, plant mix bituminous and seal coat oiling (In Sunburst)	7-30-61
211	DS 187 (5)	6.4 miles grading, drainage and surfacing (South of Harlem)	4-30-60
212	S 219 (4)	8.0 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling - (Big Sandy - West)	9-15-60
213	S 32 (9)	10.0 miles surfacing, plant mix bituminous & seal coat oiling (North and South of Bloomfield)	7-1-60
214	S 51 (5)	5.9 miles grading, drainage and surfacing (Southeast of Baker)	9-1-60
215	S 136 (1)	10.5 miles grading, drainage and surfacing (Belfry South)	9-1-60
216	S 157 (2)	10.4 miles plant mix bituminous surfacing & seal coat oiling (Kalispell West)	7-1-60
217	S 257 (3)	Threa bridges - one 400 foot riveted olate girder, Milk River - one 120 foot concrete T beam, Cherry Creek - one 75 foot treated timber trestle (Glasgow West)	9-15-60
	S 257 (4)	3.8 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Glasgow West)	11-30-60
218	S 175 (1)	6.4 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Southwest of Absarokee)	7-1-60
219	S 193 (3)	7.4 miles grading, drainage, surfacing, plant mix bituminous oiling (Valier Northwesterly)	7-1-60
220	S 2 (7)	7.3 miles grading, drainage, surfacing, plant mix bituminous & seal coat oiling (Wilborn Southeast)	8-1-60
221	S 95 (3)	7.0 miles grading, drainage, surfacing & one 100 foot treated timber bridge - Beaver Creek (Carlyle)	6-30-60
222	S 200 (4)	2.5 miles grading, drainage, surfacing and bituminous surface treatment. One 110 foot concrete T beam bridge - Smoke Creek (West of Froid)	10-15-60
223	S 187 (7)	4.2 miles grading, drainage, and surfacing (South of Harlem)	5-1-60
224	S 236 (6) U 1	One 193 foot prestressed concrete beam bridge - Musselshell River (At Musselshell)	6-30-60
225	S 258 (2)	1.2 miles grading, drainage and one 225 foot prestressed concrete beam bridge - Little Dry Creek - (North of Rock Springs)	7-31-60
226	S 227 (3)	3.7 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Hamilton Southeast)	9-30-60
227	S 313 (4)	15.6 miles plant mix bituminous and seal coat oiling (Plentywood North)	7-1-60
228	S 273 (2)	One 360 foot riveted plate girder bridge (Northeast of Emigrant)	9-30-61
229	S 307 (8)	4.2 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling. Lengthen and widen existing treated timber bridge to 250 foot - Arrow Creek. (North of Stanford)	8-15-60
230	S 71 (3)	5.0 miles grading, drainage and surfacing. One 63 foot treated timber bridge - Fish Creek (Ryegate South)	10-1-60
231	S 201 (3)	4.9 miles grading, drainage and surfacing (North of Mildred)	11-15-60
232	S 303 (4)	5.3 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (Chester South)	9-15-60
233	S 312 (2) S 336 (2)	5.6 miles grading, drainage, surfacing, plant mix bituminous and seal coat oiling (North of Great Falls)	10-1-60
	S 312 (2) S 336 (2)	Reset fencing, cattleguard etc. (North of Great Falls)	4-30-60
234	S 366 (7)	6.3 miles grading, drainage and surfacing (West of Sweetgrass)	10-1-60



LEGEND

- (3) INDEX NUMBER (Details reverse of sheet)
- (10) U. S. NUMBERED PRIMARY HIGHWAY
- (18) MONTANA NUMBERED PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- 10 FINANCIAL DISTRICT NUMBER

PROJECTS UNDER CONTRACT
MONTANA HIGHWAY COMMISSION

FEBRUARY 26, 1960 (Includes contracts let February 17, 1960)

PROJECT	AWARDED TO	AMOUNT OF BID
I-90-9(11)498 Crow Agency-Hardin	Parker & Knez Construction Hamilton, Montana	$ 25,237.07
S-201(3) Mildred-Fallon Road	Schye & Sullivan White Sulphur Springs, Montana	106,308.04
S-312(2) & S-336(2) Great Falls-North Road	Francis Tindall Lewsitown, Montana	261,457.15
S-312(2) & S-336(2) Great Falls-North Road (Cattle Guard and Fence)	Robertson & Cave, Inc. Great Falls, Montana	1,794.63
S-366(7) Sunburst-Sweetgrass- Westerly Loop Road	The O'Neil Construction Co. Havre, Montana	156,723.06
Total February Lettings		$ 4,855,899.92
Total January Lettings		5,579,845.13
ACCUMULATIVE TOTAL TO DATE		$ 10,435,745.05

As the spring construction season gets underway, this is what the Springdale Cut looks like. Lalonde Construction Co. will soon have the job finished.

Arthur Quinnell, assistant interstate engineer, explains Interstate 94 from the North Dakota line to Glendive at a public hearing in Wibaux on March 9th. Bill Brittain, district engineer at Glendive and Howard Buswell, planning survey manager are seated at the front table.

The Center Line
STATE HIGHWAY DEPARTMENT
Helena, Montana